



Federal Trade Commission

"TAR," NICOTINE AND CARBON MONOXIDE OF THE SMOKE OF 370 VARIETIES OF DOMESTIC CIGARETTES

1990

PM3001059540

**Report of "Tar," Nicotine, and Carbon Monoxide of the
Smoke of 370 Varieties of Domestic Cigarettes**

This report contains data on the "tar," nicotine, and carbon monoxide content of 370 varieties of cigarettes manufactured and sold in the United States. The test results were submitted to the Federal Trade Commission (FTC) by the six largest cigarette manufacturers in the United States. These companies are the following: The American Tobacco Company; Brown & Williamson Tobacco Corporation; Liggett Group, Inc.; Lorillard, Inc.; Philip Morris, Inc.; and R. J. Reynolds Tobacco Company, Inc.

The Tobacco Institute Testing Laboratory (TITL), a private laboratory operated by the cigarette industry, conducted most of the "tar," nicotine and carbon monoxide tests for these 370 varieties.¹ The methodology, processes and procedures that the six cigarette companies and TITL employ are identical to those the Commission, in its own testing lab, had followed in the past.² Harold Pillsbury, the former director of the FTC

¹The increase in the number of cigarettes reported herein over the number contained in the Commission's last "tar" and nicotine report results from including generic and private label cigarettes for the first time in this report. These cigarettes, as well as new or not widely available brands, were not tested by TITL. The test results were supplied to the Commission by the manufacturer, pursuant to compulsory process. Results of such non-TITL testing are indicated by single asterisks for new and not widely available brands, and double asterisks for generic and private label brands.

²The Commission determined in early 1987 to close its laboratory. The Commission found that closing the laboratory was necessary for several reasons. First, the operation of a highly complex testing program, even one limited to "tar", nicotine and
(continued...)

PM3001059541

laboratory and currently a contractor to the Commission, was given unrestricted access to the TITL laboratory for the purpose of reviewing the testing methodology and protocols used by the TITL and for monitoring the actual testing process.

TITL provided the results to the respective cigarette companies. The companies provided the data generated by TITL regarding their own brands to the FTC in response to requests issued by the Commission requiring submission of this information.

The cigarettes were tested using the Cambridge Method. This methodology has been approved by the FTC and used as the standard for cigarette testing since 1966. The testing was subjected to the conditions prescribed by the FTC in Federal Register, Volume 32, Number 147, Page 11178, dated August 1, 1967. With regard to the testing of carbon monoxide content, the conditions are specified in Federal Register, Volume 45, Number 134, Page 46483, dated July 10, 1980. The conditions prescribed in the FTC's 1967 announcement are the following:

²(...continued)
carbon monoxide, was incompatible with the expertise of the agency. Secondly, the cost of the laboratory was significant, and the Commission would have had to commit significant additional funds in order to continue the program. Finally, the Commission was persuaded that the same information could be obtained from other sources, and other means were available to verify the accuracy of industry testing results.

1. Smoke cigarettes to a 23mm. butt length, or to the length of the filter and overwrap plus 3mm. if in excess of 23mm.;
2. Base results on a test of 100 cigarettes per brand, or type;
3. Cigarettes to be tested will be selected on a random basis, as opposed to "weight selection;"
4. Determine particulate matter on a "dry" basis employing the gas chromatography method published by C.H. Sloan and B.J. Sublett in Tobacco Science 9, page 70, 1965, as modified by F.J. Schultz' and A.W. Spears' report published in Tobacco Vol. 162, No. 24, page 32, dated June 17, 1966, to determine the moisture content;
5. Determine and report the "tar" content after subtracting moisture and alkaloids (as nicotine) from particulate matter;
6. Report "tar" content to the nearest whole milligram and nicotine content to the nearest 1/10 milligram, (32 Fed. Reg. 11178 (1967)).

The 1980 FTC announcement contained specifications regarding a new testing methodology to be used in determining the carbon

monoxide (CO) and nicotine content of cigarettes. These specifications are the following:

1. Determine CO concentration using a 20-port sequential smoking machine described by H.C. Pillsbury and G. Merfeld at the 32nd Tobacco Chemists Research Conference, October, 1978;
2. The concentration of CO will be reported as milligrams per cigarette;
3. The present method for "tar" and nicotine determination will be modified to use the method described in an article entitled, "Gas Chromatographic Determination of Nicotine Contained on Cambridge Filter Pads," by John R. Wagner et al., as presented at the annual meeting of the Association of Official Analytical Chemists, October 1978. (45 Fed. Reg. 46483 (1980)).

TITL reported, and the FTC's contractor confirmed, that the tested cigarette samples were obtained by an independent company under contract to TITL. Under its contract with TITL, this company was to purchase two packages of every variety of cigarettes manufactured and distributed in 50 geographical locations throughout the United States. If not all varieties were available in every location, one or more packages of

cigarettes were purchased in the areas where the respective varieties were available. This procedure of selecting cigarettes for testing replicates the one used by the FTC. Cigarettes utilized in the test represented 370 varieties of the cigarettes sold in the U.S. at the time of the purchase (1988).

The "tar" and carbon monoxide figures are rounded to the nearest milligram (mg.). Those figures with 0.5 mg. or greater are rounded up, while those with 0.4 mg. or less are rounded down. The nicotine figures are rounded to the nearest tenth of a milligram. Those with 0.05 mg. or greater are rounded up; those with 0.04 mg. or less are rounded down.

Cigarette brands with assay results of "tar" and carbon monoxide below 0.5 mg. per cigarette variety and of nicotine below 0.05 mg. are recorded in the table as <0.5, and <0.05 respectively. The table does not differentiate, nor are actual "tar" ratings provided for these cigarettes, because the currently approved testing methodology is not sufficiently sensitive to report these components at lower levels.

The following varieties are the ten lowest in "tar" content as tested by TITL:³

1. Now 100	FHP.....<0.5
2. Now	KFHP.....<0.5
3. Now	KFSP..... 1
4. Now	KFMSP..... 1
5. Carlton	KFHP..... 1
6. Carlton	KFMSP..... 1
7. Carlton 100's	FMHP..... 1
8. Carlton 100's	FHP..... 1
9. Carlton	KFSP..... 1
10. Now 100's	FSP..... 2

NOTE: K - King Size, F - Filter, M - Menthol, HP - Hardpack, SP - Softpack.

³One "low-tar" brand was not readily available in the market in 1988 and thus was not picked up and tested by TITL, and not verified by FTC. Data supplied by the company is as follows:

Carlton Ultra King FHP.....<0.5

In descending order, those ranking the fourteen highest in "tar" content are the following:⁴

1. Old Gold Straights	KNFSP.....	27
2. Philip Morris Commander	KNFSP.....	26
3. Players	RNFHP.....	25
4. Herbert Tareyton	KNFSP.....	25
5. Pall Mall	KNFSP.....	25
6. Pall Mall 25's	KNFSP.....	25
7. Lucky Strike	RNFSP.....	24
8. Chesterfield	KNFSP.....	24
9. Best Buy**	KNFSP.....	24
10. Famous Value**	KNFSP.....	24
11. Gridlock**	KNFSP.....	24
12. Pyramid*	KNFSP.....	24
13. Raleigh	KNFSP.....	24
14. English Ovals	KNFHP.....	24

Note: K - King Size, F - Filter, M - Menthol, HP - Hardpack, SP - Softpack.

⁴Asterisked entries, (* - new or not readily available brand; ** - generic or private label brand), were not tested by TITL, and the data, supplied by the company, was not verified by the FTC.

On April 13, 1983, the Commission announced it had determined that its then testing methodology for "tar," nicotine, and carbon monoxide understated the measured deliveries for Brown & Williamson's Barclay cigarettes. Therefore, Barclay cigarettes would be delisted from the Commission's reports for "tar," nicotine, and carbon monoxide until a new, accurate methodology could be tested and adopted. The Commission has found that there is a significant likelihood that the same problem exists with two other Brown & Williamson varieties -- Kool Ultra and Kool Ultra 100's.

Although there have been several adaptations offered for the testing methodology, none have proven to be satisfactory. At present, other methods for testing channel ventilated cigarettes are being considered by CORESTA.³ Commission staff is monitoring these proceedings and is continuing to search for an appropriate adaptation.

On July 25, 1986, the Commission informed Brown & Williamson that as a result of a review of data presented by Brown & Williamson regarding a "tar" and nicotine rating for two varieties of Barclay cigarettes with a new filter, the Commission

³CORESTA is a multinational European organization studying the testing of cigarettes.

04-00-84 10-52 202 637 1305 PHILIP MORRIS CO 00357043

would authorize, under certain conditions, the following legends for advertising purposes:

1. For Barclay King size:
3 mg. "tar," .2 mg. nicotine
avg. per cigarette as authorized by FTC.
2. For Barclay 100's
5 mg. "tar," .4 mg. nicotine
avg. per cigarette as authorized by FTC.

Brown & Williamson also agreed to provide the Commission with data, in the near future, regarding "tar" and nicotine ratings to be used in advertising for Kool Ultra and Kool Ultra 100's. Until this data is presented it has been agreed that the ratings for these two varieties will not be included in Commission reports.

The following pages present, in alphabetical order, the "tar," nicotine, and carbon monoxide data collected from the cigarette companies for 370 varieties of cigarettes sold domestically in 1988.

"TAR," NICOTINE, AND CARBON MONOXIDE
VALUES FOR 1988

BRAND NAME	DESCRIPTION ¹	TAR ²	NIC ³	CO ⁴
ALPINE	KING, MEN, F, SP	17	1.1	16
ALPINE*	100, MEN, F, SP	15	1.1	15
ALPINE*	KING, MEN, SP, LT	09	0.7	11
ALPINE*	100, MEN, F, SP, LT	10	0.8	11
ALPINE*	LONG, MEN, F, HP, FULL-FLA	15	0.9	15
ALPINE*	LONG, MEN, F, HP, LT	9	0.6	10
AMERICAN FILTER*	100, F, SP	17	1.2	15
AMERICAN FILTER*	KING, F, SP	17	1.2	14
AMERICAN LIGHTS	100, F, SP, LT	13	1.1	14
AMERICAN LIGHTS	KING, F, SP	12	0.9	13
AUSTIN*	KING, F, SP	15	1.0	16
AUSTIN*	100, F, SP, FULL-FLA	15	1.0	17
AUSTIN*	LT, KING, F, SP	10	0.7	11
AUSTIN*	LT, 100, F, SP	11	0.8	12
AUSTIN*	ULTRA-LT, 100, F, SP	5	0.5	9
AUSTIN*	LT, MEN, KING, F, SP	10	0.7	13
AUSTIN*	LT, 100, MEN, F, SP	10	0.8	12
BELAIR	SP, F, KING, MEN	11	0.8	10
BELAIR	100, F, SP, MEN	9	0.7	9
BENSON AND HEDGES	KING, F, HP	15	1.3	13
BENSON AND HEDGES*	LT, 100, F, HP	11	0.8	12
BENSON AND HEDGES*	LT, 100, F, MEN, HP	10	0.8	11
BENSON AND HEDGES	100, F, SP	17	1.2	16
BENSON AND HEDGES	F, HP, 100	17	1.2	17
BENSON AND HEDGES	100, MEN, F, HP	17	1.2	17
BENSON AND HEDGES	MEN, 100, SP, F	17	1.2	16
BENSON AND HEDGES	100, LT, F, SP	11	0.8	13
BENSON AND HEDGES	100, LT, MEN, SP	11	0.8	12
BENSON AND HEDGES	DLX, ULTRA-LT, F, HP, 100	5	0.4	6
BENSON AND HEDGES	DLX, ULTRA-LT, MEN, F, HP, 100	5	0.5	6
BENSON AND HEDGES	KING, F, SP, MULTIFILTER	11	0.8	11
BENSON AND HEDGES*	LT, 100, F, MEN, HP	10	0.8	11

*New brands or brands not widely available in the marketplace:
data supplied by the company.

**Private label cigarettes: data supplied by the company.

¹ F-Filter; NF-Non Filter; M-Menthol; HP-Hard Pack; SP-Soft Pack;
Reg-Regular (70mm); K-King Size (80-85mm); 100 & 120 are in
millimeters per cigarette; LT-Light; FLA-Flavor; DLX-Deluxe;
25-Number of cigarettes per pack if other than 20.

² Tar: Total particulate matter in milligrams per cigarette less
nicotine and water.

³ NIC: Total alkaloids reported as milligrams of nicotine per
cigarette.

⁴ CO: Carbon monoxide reported in milligrams per cigarette..
"00" entered where CO data was not available.

<: (less than) below the sensitivity of the testing method.

TAR² NIC³ CO⁴

BRAND NAME

DESCRIPTION¹

BEST BUY**	KING, F, FUL-FLA, SP	15	1.0	00
BEST BUY**	100, F, FUL-FLA, SP	13	1.0	00
BEST BUY**	LT, KING, F, SP	10	0.7	00
BEST BUY**	LT, KING, F, MEN, SP	10	0.7	00
BEST BUY**	LT, 100, F, SP	10	0.7	00
BEST BUY**	LT, 100, F, MEN, SP	11	0.8	00
BEST BUY**	ULTRA-LT, KING, F, SP	6	0.5	00
BEST BUY**	ULTRA-LT, 100, F, SP	7	0.5	00
BEST BUY**	KING, NF, SP	24	1.6	00
BEST VALUE**	FULL FLAVOR, KING, F, SP	15	1.0	16
BEST VALUE**	100, FULL FLAVOR, F, SP	15	1.0	17
BEST VALUE**	LT, KING, F, SP	11	0.7	11
BEST VALUE**	LT, 100, F, SP	11	0.8	12
BEST VALUE**	ULTRA, LT, 100, F, SP	5	0.5	9
BEST VALUE**	LT, MEN, KING, F, SP	10	0.7	13
BEST VALUE**	LT, MEN, 100, F, SP	10	0.8	12
BEST VALUE**	100, F, SP, MEN	6	0.4	10
BRIGHT	100, F, SP, ULTRA	5	0.4	7
CAMBRIDGE	LT, KING, SP, F	12	0.8	13
CAMBRIDGE	LT, KING, MEN, F, SP	12	0.8	12
CAMBRIDGE	LT, 100, F, SP	12	0.9	15
CAMBRIDGE	LT, 100, MEN, F, SP	12	0.9	15
CAMBRIDGE	FULL-FLA, KING, F, SP	17	1.1	16
CAMBRIDGE	FULL-FLA, 100, F, SP	17	1.2	16
CAMEL	REG, NF, SP	22	1.4	14
CAMEL	F, KING, SP	16	1.0	15
CAMEL	HP, F, KING	17	1.1	17
CAMEL	100, F, SP	18	1.1	19
CAMEL	LT, HP, F, KING	10	0.6	12
CAMEL	LT, F, KING, SP	9	0.6	11
CAMEL	LT, 100, F, SP	11	0.8	15
CAPRI	100, F, HP	9	0.8	6
CAPRI	MEN, 100, F, HP	9	0.7	6
CAPRI*	120, HP, F	14	1.1	9
CAPRI*	120, F, HP, MEN	12	0.9	6
CARLTON	F, SP, 120	6	0.6	6
CARLTON	F, SP, KING	1	0.1	2
CARLTON	MEN, SP, 120, F	6	0.6	5
CARLTON	MEN, SP, KING, F	1	0.1	1
CARLTON	F, HP, KING	1	0.1	2
CARLTON	F, HP, 100	1	0.1	1
CARLTON	F, SP, 100	3	0.3	5
CARLTON	MEN, HP, 100, F	1	0.1	1
CARLTON	MEN, SP, 100, F	1	0.1	1
CARLTON*	ULTRA, KING, F, HP	5	0.4	6
CENTURY	F, KING, SP, 25	<0.5	<0.05	<0.5
CENTURY	LT, F, KING, SP, 25	15	1.0	18
CENTURY	100, F, SP, 25	10	0.7	12
CENTURY	LT, 100, F, SP, 25	18	1.1	21
CENTURY	LT, 100, F, SP, 25	12	0.9	13
CENTURY	LT, 100, F, SP, MEN, 25	11	0.8	14
CHESTERFIELD	REG, NF, SP	20	1.3	13
CHESTERFIELD	NF, KING, SP	24	1.6	15
CHESTERFIELD*	LT, KING, F, SP	10	1.0	11
CHESTERFIELD*	LT, 100, F, SP	11	1.1	11

BRAND NAME	DESCRIPTION 1	TAR 2	NIC 3	CO 4
CONVOY*	KING, LT, F, SP	14	1.1	13
COST CUTTER**	FULL FLAVOR, KING, F, SP	15	1.0	15
COST CUTTER**	FULL FLAVOR, 100, F, SP	15	1.0	17
COST CUTTER**	LT, KING, F, SP	11	0.7	11
COST CUTTER**	LT, 100, F, SP	11	0.8	12
COST CUTTER**	ULTRA LT, 100, F, SP	5	0.5	9
COST CUTTER**	LT, MEN, KING, F, SP	10	0.7	13
COST CUTTER**	LT, MEN, 100, F, SP	10	0.8	12
COST CUTTER**	LT, F, KING, SP	12	0.7	15
DORAL	LT, MEN, F, KING, SP	12	0.6	14
DORAL	LT, F, 100, SP	11	0.7	13
DORAL	LT, F, 100, MEN, SP	12	0.7	14
DORAL	F, KING, FULL-FLA, SP	17	0.9	20
DORAL	100, F, FULL-FLA, SP	15	0.8	17
DORAL	ULTRA-LT, 100, F, SP	7	0.5	12
DORAL	FULL-FLA, MEN, KING, SP, F	15	1.1	18
DORAL*	FULL-FLA, MEN, 100, F, SP	15	1.1	18
DORAL*	KING, NF, HP	24	1.8	16
ENGLISH OVAL	LT, HP, 120, F	13	1.1	12
EVE	LT, MEN, HP, 120, F	13	1.2	12
EVE*	LT, MEN, SP, 120, F	13	1.1	12
EVE*	SLIM-LT, F, MEN, 100, HP	13	1.0	11
EVE*	SLIM-LT, F, 100, HP	13	1.0	11
EVE*	ULTRA-LT, 120, HP, F	6	0.7	4
EVE*	ULTRA-LT, 120, HP, F, MEN	6	0.7	4
EVE*	KING, F, HP	10	0.7	00
FEL**	ULTRA-LT, 100, SP	7	0.5	00
FEL**	KING, F, MEN, SP	11	0.7	00
FEL**	LT, KING, F, SP	10	0.7	00
FEL**	LT, 100, F, SP	10	0.7	00
FEL**	LT, 100, F, MEN, SP	11	0.8	00
FEL**	LT, KING, F, SP	11	0.8	11
FALCON	MEN, LT, KING, F, SP	10	0.8	12
FALCON	LT, 100, F, SP	12	0.9	15
FALCON	MEN, LT, 100, F, SP	9	0.7	11
FALCON	KING, F, SP	15	1.0	00
FAMOUS VALUE**	LT, KING, F, SP	10	0.7	00
FAMOUS VALUE**	LT, KING, F, MEN, SP	11	0.7	00
FAMOUS VALUE**	100, F, SP	15	1.0	00
FAMOUS VALUE**	LT, 100, F, SP	10	0.7	00
FAMOUS VALUE**	LT, 100, F, MEN, SP	11	0.8	00
FAMOUS VALUE**	ULTRA-LT, KING, F, SP	6	0.5	00
FAMOUS VALUE**	ULTRA-LT, 100, F, SP	7	0.5	00
FAMOUS VALUE**	KING, NF, SP	24	1.6	00
FAMOUS VALUE**	LT, KING, F, SP	8	0.7	10
GOLDEN LIGHTS	LT, MEN, KING, F, SP	8	0.8	9
GOLDEN LIGHTS	LT, MEN, 100, F, SP	9	0.8	10
GOLDEN LIGHTS	LT, 100, F, SP	10	0.9	11
GOLDEN LIGHTS	LT, KING, F, HP	9	0.8	10
GOLDEN LIGHTS	LT, 100, F, HP, DLX	10	0.9	11
GRIDLOCK**	KING, NF, SP	24	1.6	00
GRIDLOCK**	KING, FULL-FLA, F, SP	15	1.0	00
GRIDLOCK**	LT, 100, F, SP	10	0.7	00
GRIDLOCK**	ULTRA-LT, 100, F, SP	7	0.5	00
HARLEY DAVIDSON	F, KING, SP	14	1.0	16

BRAND NAME	DESCRIPTION 1	TAR ²	NIC ³	CO ⁴
HERBERT TAREYTON				
HI-LITE	KING, NF, SP	25	1.6	18
KENT	100, F, HP	14	1.0	15
KENT	HP, KING, F	11	0.9	13
KENT	KING, F, SP	12	0.9	14
KENT	100, F, SP	14	1.0	15
KENT	MEN, 100, F, SP	14	1.0	14
KENT	III, KING, F, SP	3	0.3	4
KENT	III, 100, PLAIN, F, SP	5	0.4	7
KENT	III, 100, F, HP	5	0.5	7
KENT	KING, MEN, F, SP	17	1.1	17
KOOL	MEN, 100, F, SP	17	1.2	17
KOOL	KING, MEN, F, HP	16	1.1	16
KOOL	REG, NF, SP, MEN	22	1.4	14
KOOL	LT, KING, F, SP, MEN	9	0.7	9
KOOL	LT, 100, F, MEN, SP	12	0.9	13
KOOL	MILD, KING, F, MEN, SP	12	0.9	11
KOOL	MILD, KING, F, MEN, HP	12	1.0	13
KOOL	MILD, 100, F, MEN, SP	13	1.1	11
KOOL	100, F, SP, 10-PR, 30	8	0.8	6
KOOL	LONG, LT, SP, F, 100	14	1.1	13
KOOL	F, KING, SP	14	1.1	13
L AND M	HP, F, KING, HP	14	1.1	13
L AND M	SUPER, KING, 100, F, SP	14	1.1	14
L AND M	SUPERIOR, KING, SP, F	14	1.1	14
L AND M	LT, F, KING, SP	13	1.0	13
L AND M	LT, F, 100, SP	14	1.1	15
LARK	KING, F, SP	14	1.1	15
LARK	LT, EXTRA LONG, SP, 100, F	15	1.2	14
LARK	REG, NF, SP	24	1.5	16
LUCKY STRIKE	KING, F, SP	12	0.9	13
LUCKY STRIKE	KING, F, HP	12	0.9	13
LUCKY STRIKE	F, 100, SP	12	1.0	13
LUCKY STRIKE	LT, KING, F, SP	8	0.7	10
LUCKY STRIKE	LT, 100, F, SP	9	0.7	10
LUCKY STRIKE	MEN, 100, F, SP	12	1.0	12
LUCKY STRIKE	LT, KING, F, SP	9	0.6	14
LUCKY STRIKE	KING, F, SP	14	0.9	15
LUCKY STRIKE	KING, F, HP	14	0.9	16
MAGNA	100, F, SP	14	1.1	13
MAGNA	100, F, LT, SP	9	0.8	11
MALIBU	100, MEN, SP, F	12	0.9	13
MALIBU	KING, F, SP	16	1.2	14
MALIBU	KING, F, LT, SP	10	0.8	11
MALIBU	KING, F, MEN, SP	17	1.2	15
MALIBU	KING, F, HP	17	1.1	15
MALIBU	KING, F, SP	17	1.2	17
MALIBU	MEN, KING, F, SP	17	1.2	15
MALIBU	SP, 100, F	17	1.2	16
MALIBU	HP, 100, F	17	1.2	17
MARLBORO	LT, KING, F, SP	11	0.8	12
MARLBORO	LT, KING, F, SP, 25	11	0.8	12
MARLBORO	LT, KING, F, HP	11	0.8	12
MARLBORO	LT, 100, F, SP	11	0.8	13
MARLBORO	LT, KING, MEN, F, SP	10	0.8	10
MARLBORO	KING, F, SP, 25	17	1.1	16

BRAND NAME

DESCRIPTION 1

TAB² NIC³ CO⁴

MARLBORO	LT, 100, F, HP	11	0.8	12
MARLBORO	LT, 100, MEN, F, SP	11	0.9	12
MARLBORO	LT, 100, MEN, HP	10	0.8	11
MARLBORO	LT, KING, MEN, HP	10	0.8	11
MAX	F, 120, SP	17	1.3	18
MAX	MEN, 120, F, SP	17	1.4	17
MERIT	KING, F, SP	8	0.6	10
MERIT	MEN, KING, F, SP	8	0.6	10
MERIT	100, F, SP	10	0.8	12
MERIT	100, MEN, F, SP	10	0.8	12
MERIT	KING, HP, F	8	0.6	10
MERIT	ULTRA-LT, KING, F, SP	4	0.4	6
MERIT	100, F, SP, ULTRA-LT	5	0.5	7
MERIT	ULTRA-LT, MEN, KING, F, SP	5	0.4	6
MERIT	100, MEN, F, SP, ULTRA-LT	6	0.5	8
MERIT	MEN, KING, F, HP	9	0.7	9
MERIT*	ULTRA-LT, KING, F, HP	5	0.4	5
MERIT*	ULTRA-LT, 100, F, HP	6	0.6	6
MERIT*	LONG, F, HP	9	0.7	10
MORE	120, F, SP	16	1.2	22
MORE	MEN, 120, F, SP	17	1.3	22
MORE	LT, 100, F, HP	10	0.8	11
MORE	LT, MEN, 100, F, HP	9	0.7	10
MORE	LT, 120, F, SP	13	1.0	20
MORE	LT, 120, MEN, F, SP	12	1.0	20
NEWPORT	KING, MEN, F, SP	17	1.3	18
NEWPORT	KING, MEN, F, SP, 25	17	1.3	18
NEWPORT	100, MEN, F, SP	19	1.5	19
NEWPORT	100, MEN, F, SP, 25	19	1.5	20
NEWPORT	HP, MEN, F, KING	16	1.2	16
NEWPORT	LT, F, KING, MEN, SP	8	0.7	9
NEWPORT	LT, 100, F, MEN, SP	9	0.8	10
NEWPORT	LT, HP, KING, F, MEN	9	0.7	10
NEWPORT	MEN, 100, F, HP	19	1.5	19
NEWPORT	LT, MEN, 100, HP, F	9	0.8	10
NEWPORT	STRIPE, SLIM, LT, F, 100, HP	9	0.8	11
NEWPORT	STRIPE, 100, F, HP	12	0.9	17
NEWPORT	STRIPE, MEN, 100, F, HP	12	0.9	16
NEWPORT	LT, KING, MEN, SP	11	0.7	00
NO FRILLS**	LT, 100, SP	10	0.7	00
NO FRILLS**	ULTRA-LT, 100, SP	7	0.5	00
NOW	100, F, SP	2	0.2	3
NOW	F, KING, SP	1	0.1	2
NOW	HP, F, KING	<0.5	<0.05	<0.5
NOW	HP, 100, F	<0.5	<0.05	<0.5
NOW	MEN, 100, F, SP	2	0.3	4
NOW	MEN, F, KING, SP	1	0.1	2
NOW	SP, F, KING	17	1.2	18
OLD GOLD	SP, F, 100	20	1.5	20
OLD GOLD	SP, STRAIGHT, KING, NF	27	1.9	19
OLD GOLD	SP, LT, F, KING	9	0.8	11
OLD GOLD	SP, LT, F, 100	12	0.9	17
P.M. BLUES*	100, F, SP, MEN	16	1.2	16
P.M. BLUES*	KING, F, SP, MEN	17	1.2	16
PALL MALL	KING, NF, SP	25	1.6	17

TAR² NIC³ CO⁴DESCRIPTION¹

BRAND NAME

BRAND NAME	DESCRIPTION ¹	TAR ²	NIC ³	CO ⁴
PALL MALL	KING, NF, SP, 25	25	1.6	17
PALL MALL	LT, 100, F, SP	10	0.8	12
PALL MALL	F, 100, SP	17	1.3	17
PALL MALL	LT, KING, NF, SP	16	1.1	00
PALL MALL	LT, 100, MEN, F, SP	13	1.1	13
PALL MALL	F, KING, LOW-TAR, SP, RED	14	1.0	13
PALL MALL	F, 100, LOW-TAR, SP, RED	14	1.1	14
PALL MALL	LT, KING, F, SP, RED	10	0.8	11
PALL MALL	LT, 100, F, SP, RED	11	0.9	12
PARLIAMENT	LT, KING, F, HP	9	0.7	10
PARLIAMENT	LT, F, KING, SP	9	0.7	10
PARLIAMENT	LT, 100, F, SP	12	0.9	13
PHILIP MORRIS	COMMANDER, KING, NF, SP	26	1.6	16
PHILIP MORRIS*	REG, NF, SP	23	1.3	13
PHILIP MORRIS	INTL, 100, F, HP	17	1.1	16
PHILIP MORRIS	INTL, MEN, 100, F, HP	17	1.1	16
PHILIP MORRIS	NF, REG, SP	18	1.2	10
PLAYERS	REG, NF, HP	25	1.7	16
PLAYERS	KING, F, HP	12	0.8	12
PLAYERS	KING, F, MEN, HP	12	0.8	12
PLAYERS	100, F, HP	14	1.0	13
PLAYERS*	100, F, MEN, HP	14	1.0	13
PLAYERS	LT, KING, F, SP	10	0.7	11
PLAYERS	LT, KING, F, MEN, SP, 25	10	0.7	11
PLAYERS	LT, 100, F, SP, 25	12	0.9	14
PLAYERS	LT, 100, F, MEN, SP, 25	11	0.8	14
PLAYERS	LT, KING, F, SP, 25	10	0.7	11
PYRAMID*	KING, LT, F, SP	14	1.1	13
PYRAMID*	LT, 100, SP, F	14	1.1	14
PYRAMID*	100, F, SP, MEN	14	1.1	14
PYRAMID*	NF, KING, SP	24	1.6	15
PYRAMID*	ULTRA-LT, 100, F, SP	6	0.7	5
RALEIGH	KING, F, SP	16	1.0	15
RALEIGH	100, F, SP	16	1.0	16
RALEIGH	LT, KING, F, SP	11	0.9	13
RALEIGH	LT, 100, F, SP	12	0.9	14
RALEIGH	REG, NF, SP	24	1.4	17
RICHLAND	F, KING, SP, 25	17	1.2	16
RICHLAND	100, F, SP, 25	17	1.3	17
RICHLAND	F, MEN, KING, SP, 25	16	1.1	16
RICHLAND	100, F, SP, MEN, 25	16	1.2	16
RICHLAND	LT, F, KING, SP, 25	12	0.9	13
RICHLAND	LT, 100, F, SP, 25	12	0.9	14
RICHLAND	F, KING, SP	16	1.1	16
RICHLAND	100, F, SP	17	1.2	17
RICHLAND	MEN, KING, F, SP	16	1.0	16
RICHLAND	MEN, 100, F, SP	17	1.2	17
RICHLAND	LT, KING, SP, F	12	0.9	13
RICHLAND	LT, 100, F, SP	12	0.9	14
RITZ	100, F, HP	10	0.8	11
RITZ	100, F, MEN, HP	11	0.9	12
ROYALE*	LT, KING, F, SP	10	0.7	00
ROYALE*	LT, KING, F, MEN, SP	11	0.7	00
ROYALE*	LT, 100, F, SP	10	0.7	00
ROYALE*	LT, 100, F, MEN, SP	11	0.8	00

BRAND NAME	DESCRIPTION ¹	TAR ²	NIC ³	CO ⁴
SALEM	KING, F, MEN, SP	16	1.0	17
SALEM	LT, 100, F, MEN, SP	9	0.7	11
SALEM	LT, KING, F, MEN, SP	10	0.7	13
SALEM	SLIM-LT, HP, 100, F, MEN	10	0.8	10
SALEM	100, F, SP, MEN	17	1.2	16
SALEM	F, KING, MEN, SP, ULTRA-LT	5	0.4	8
SALEM	100, F, SP, MEN, ULTRA-LT	5	0.4	8
SALEM	LT, 100, CUSTOM CASE, HP, MEN	11	0.9	12
SARATOGA	120, F, HP	15	1.1	15
SARATOGA	120, MEN, F, HP	15	1.1	15
SATIN 100	100, F, SP	11	1.0	13
SATIN MENTHOL 100	MEN, 100, SP	11	1.0	13
SAVVY*	LT, 100, SP, F	11	1.1	11
SAVVY*	LT, 100, MEN, F, SP	11	1.1	11
SAVVY*	ULTRA-LT, F, SP, 100	6	0.7	5
SILVA THINS	F, 100, SP	12	1.0	10
SILVA THINS	MEN, F, 100, SP	12	1.1	10
SILVA THINS	F, 100, HP	12	1.0	13
SILVA THINS	MEN, F, 100, HP	11	0.9	12
SPRING	MEN, F, 100, SP	19	1.5	19
STRIDE*	LT, F, KING, SP	14	1.1	13
STRIDE*	LT, F, 100, SP	14	1.1	14
STRIDE*	LT, F, MEN, 100, SP	14	1.1	14
TALL	F, 120, SP	20	1.6	20
TALL	MEN, 120, F, SP	18	1.6	16
TAREYTON	F, KING, SP	14	1.0	16
TAREYTON	F, 100, SP	14	1.0	17
TAREYTON	LT, F, SP	5	0.4	6
TAREYTON	LONG, LT, 100, F, SP	8	0.7	9
TRIUMPH	KING, F, SP	3	0.3	4
TRIUMPH	100, F, SP	5	0.5	7
TRIUMPH	MEN, KING, F, SP	4	0.3	4
TRIUMPH	MEN, 100, F, SP	5	0.5	8
TRUE	KING, F, SP	5	0.5	6
TRUE	MEN, KING, F, SP	5	0.5	6
TRUE	MEN, 100, F, SP	7	0.6	7
TRUE	100, F, SP	7	0.6	7
VANTAGE	100, F, SP	9	0.6	13
VANTAGE	F, KING, SP	11	0.8	11
VANTAGE	ULTRA-LT, 100, F, SP	6	0.5	9
VANTAGE	ULTRA-LT, F, KING, SP	6	0.5	8
VANTAGE	MEN, F, KING, SP	10	0.7	13
VANTAGE	MEN, 100, F, SP	8	0.6	13
VICEROY	KING, F, SP	15	1.0	15
VICEROY	100, F, SP	16	1.1	15
VICEROY	LT, F, KING, SP	11	0.9	13
VICEROY	LT, F, 100, SP	12	0.9	14
VIRGINIA SLIMS	SLIM, F, SP, 100	15	1.1	14
VIRGINIA SLIMS	SLIM, MEN, 100, F, SP	15	1.1	14
VIRGINIA SLIMS	SLIM-LT, 100, HP, F	9	0.7	9
VIRGINIA SLIMS	SLIM-LT, HP, MEN, 100, F	9	0.7	9
VIRGINIA SLIMS	SLIM-LT, HP, 120, F	15	1.1	15
VIRGINIA SLIMS	SLIM-LT, HP, MEN, 120, F	15	1.1	15
VIRGINIA SLIMS*	ULTRA-LT, 100, F, HP	6	0.5	7
VIRGINIA SLIMS*	ULTRA-LT, MEN, 100, F, HP	6	0.5	7

PM3001059556

BRAND NAME	DESCRIPTION ¹	TAR ²	NIC ³	CO ⁴
WINSTON	100, F, SP	17	1.1	19
WINSTON	KING, F, SP	17	1.1	16
WINSTON	HP, F, KING	17	1.1	17
WINSTON	LT, 100, F, SP	11	0.8	13
WINSTON	LT, F, KING, SP	11	0.8	13
WINSTON	LT, 100, F, HP	10	0.7	12
WINSTON	ULTRA-LT, 100, F, SF	5	0.5	9
WINSTON	ULTRA-LT, F, KING, SP	5	0.5	9
WINSTON	LT, HP, F, KING	10	0.6	12

PAGE 1

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR ¹	NICOTINE ²	CARBON MONOXIDE ³
CAMBRIDGE	KING SIZE; FILTER; (HARD PACK)	*	*	*
CARLTON	KING SIZE; FILTER; (HARD PACK)	*	*	*
CARLTON 100	100MM; FILTER; (HARD PACK)	1	0.1	*
CARLTON 100	100MM; FILTER; MENTHOL; (HARD PACK)	*	*	*
NOW	KING SIZE; FILTER; (HARD PACK)	*	*	*
NOW 100	100MM; FILTER; (HARD PACK)	*	0.1	*
CAMBRIDGE	KING SIZE; FILTER	1	0.1	1
CARLTON	KING SIZE; FILTER; MENTHOL	1	0.1	1
KOOL ULTRA**	KING SIZE; FILTER; MENTHOL	2	0.1	1
NOW	KING SIZE; FILTER; MENTHOL	1	0.1	1
NOW 100	100MM; FILTER; MENTHOL	2	0.2	1
BENSON & HEDGES	REG SIZE; FILTER; (HARD PACK)	1	0.1	2
CARLTON	KING SIZE; FILTER	1	0.1	2
KENT III	KING SIZE; FILTER	3	0.3	2
NOW	KING SIZE; FILTER	1	0.1	2
NOW 100	100MM; FILTER	3	0.3	2
TRIUMPH	KING SIZE; FILTER; MENTHOL	3	0.3	2
DORAL II	KING SIZE; FILTER	4	0.4	3
DORAL II	KING SIZE; FILTER; MENTHOL	4	0.4	3
KOOL ULTRA 100**	100MM; FILTER; MENTHOL	4	0.4	3
TRIUMPH	KING SIZE; FILTER	3	0.3	3
ICEBERG 100	100MM; FILTER; MENTHOL	4	0.3	4
MERIT ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	4	0.4	4
TAREYTON LIGHTS	KING SIZE; FILTER	4	0.4	4
TRIUMPH 100	100MM; FILTER; MENTHOL	4	0.4	4
TRUE	KING SIZE; FILTER	5	0.4	4
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; (HARD PACK)	5	0.4	5
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; MENTHOL; (HARD PACK)	5	0.4	5
CAMBRIDGE 100	100MM; FILTER	5	0.4	5
CARLTON 120	120MM; FILTER	7	0.6	5
CARLTON 120	120MM; FILTER; MENTHOL	7	0.6	5
KENT III 100	100MM; FILTER	4	0.4	5
MERIT ULTRA LIGHTS	KING SIZE; FILTER	5	0.4	5
MERIT ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	5	0.4	5
TRIUMPH 100	100MM; FILTER	4	0.4	5
TRUE	KING SIZE; FILTER; MENTHOL	5	0.4	5
CARLTON 100	100MM; FILTER	5	0.4	6
CARLTON 100	100MM; FILTER; MENTHOL	5	0.4	6
L & M LIGHTS 100	100MM; FILTER	8	0.8	6
MERIT ULTRA LIGHTS 100	100MM; FILTER	5	0.4	6
SALEM ULTRA	KING SIZE; FILTER; MENTHOL	5	0.4	6
SALEM ULTRA 100	100MM; FILTER; MENTHOL	5	0.4	6
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER	5	0.4	6

1 "tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

** See statement in text concerning KOOL Ultra brands.

PM3001059558

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR ¹	NICOTINE ²	CARBON MONOXIDE ³
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	5	0.4	6
VANTAGE ULTRA LIGHTS 100	100MM; FILTER	5	0.5	6
WINSTON ULTRA LIGHTS	KING SIZE; FILTER	5	0.4	6
BELAIR 100	100MM; FILTER; MENTHOL	8	0.6	7
BRIGHT	KING SIZE; FILTER; MENTHOL	6	0.5	7
BRIGHT 100	100MM; FILTER; MENTHOL	6	0.5	7
L & M LIGHTS	KING SIZE; FILTER	8	0.7	7
PALL MALL EXTRA LIGHT	KING SIZE; FILTER	7	0.6	7
TAREYTON LONG LIGHTS 100	100MM; FILTER	7	0.6	7
VANTAGE ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	5	0.4	7
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; (HARD PACK)	8	0.6	7
WINSTON ULTRA LIGHTS 100	100MM; FILTER	5	0.5	7
CAMEL LIGHTS	KING SIZE; FILTER; (HARD PACK)	9	0.7	8
KENT GOLDEN LIGHTS	KING SIZE; FILTER; MENTHOL	8	0.7	8
MORE LIGHTS 100	100MM; FILTER; (HARD PACK)	8	0.6	8
MORE LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	8	0.6	8
NEWPORT LIGHTS	KING SIZE; FILTER; MENTHOL	8	0.7	8
SILVA THINS 100	100MM; FILTER; MENTHOL	11	0.9	8
TRUE 100	100MM; FILTER	8	0.6	8
TRUE 100	100MM; FILTER; MENTHOL	7	0.6	8
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	8	0.6	8
BELAIR	KING SIZE; FILTER; MENTHOL	10	0.7	9
EVE LIGHTS 100	100MM; FILTER	12	0.9	9
EVE LIGHTS 100	100MM; FILTER; MENTHOL	12	0.9	9
KENT GOLDEN LIGHTS	KING SIZE; FILTER	9	0.8	9
KENT GOLDEN LIGHTS 100	100MM; FILTER; MENTHOL	9	0.8	9
KOOL LIGHTS	KING SIZE; FILTER; MENTHOL	8	0.7	9
KOOL LIGHTS 100	100MM; FILTER; MENTHOL	9	0.7	9
MERIT	KING SIZE; FILTER	8	0.5	9
NEWPORT LIGHTS	KING SIZE; FIL; MENTHOL; (HARD PACK)	9	0.7	9
PALL MALL LIGHT 100	100MM; FILTER	9	0.7	9
PARLIAMENT LIGHTS	KING SIZE; FILTER; (HARD PACK)	9	0.6	9
PARLIAMENT LIGHTS	KING SIZE; FILTER	9	0.6	9
RALEIGH LIGHTS 100	100MM; FILTER	9	0.7	9
SALEM SLIM LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	8	0.7	9
SILVA THINS 100	100MM; FILTER	11	0.9	9
WINSTON LIGHTS	KING SIZE; FILTER	8	0.7	9
BENSON & HEDGES LIGHTS 100	100MM; FILTER; MENTHOL	10	0.7	10
CAMEL LIGHTS	KING SIZE; FILTER	8	0.7	10
KENT	KING SIZE; FILTER	12	0.9	10
KENT GOLDEN LIGHTS 100	100MM; FILTER	9	0.8	10
LUCKY STRIKE	KING SIZE; FILTER; (HARD PACK)	11	0.8	10
LUCKY STRIKE	KING SIZE; FILTER	10	0.8	10

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

** See statement in text concerning Real Ultra brand.

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
LUCKY STRIKE 100	100MM; FILTER	11	0.9	10
MERIT	KING SIZE; FILTER; MENTHOL	8	0.5	10
MULTIFILTER	KING SIZE; FILTER	12	0.5	10
MULTIFILTER	KING SIZE; FILTER; MENTHOL	12	0.8	10
NEWPORT LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	10
OLD GOLD LIGHTS	KING SIZE; FILTER	9	0.8	10
RALEIGH LIGHTS	KING SIZE; FILTER	10	0.8	10
SATIN 100	100MM; FILTER; MENTHOL	9	0.8	10
VICEROY RICH LIGHTS	KING SIZE; FILTER	10	0.7	10
BENSON & HEDGES	KING SIZE; FILTER; (HARD PACK)	15	1.1	11
BENSON & HEDGES LIGHTS 100	100MM; FILTER	10	0.7	11
CENTURY LIGHTS	KING SIZE; FILTER	9	0.7	11
CHESTERFIELD	REG SIZE; NON-FILTER	19	1.2	11
ENGLISH OVALS	REG SIZE; NON-FILTER; (HARD PACK)	23	1.8	11
EVE LIGHTS 120	120MM; FILTER; (HARD PACK)	14	1.1	11
EVE LIGHTS 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.1	11
KENT	KING SIZE; FILTER; (HARD PACK)	12	0.9	11
KENT 100	100MM; FILTER	13	1.0	11
KOOL MILDS	KING SIZE; FILTER; MENTHOL	10	0.7	11
MARLBORO LIGHTS	KING SIZE; FILTER; (HARD PACK)	10	0.7	11
MARLBORO LIGHTS	KING SIZE; FILTER	10	0.7	11
MARLBORO LIGHTS 100	100MM; FILTER	10	0.7	11
MERIT 100	100MM; FILTER; MENTHOL	9	0.7	11
PALL MALL LIGHT 100	100MM; FILTER; MENTHOL	12	1.0	11
PARLIAMENT LIGHTS 100	100MM; FILTER	12	0.8	11
PLAYERS	KING SIZE; FILTER; (HARD PACK)	12	0.8	11
PLAYERS	KING SIZE; FILTER; MENTHOL	12	0.8	11
PLAYERS 100	100MM; FILTER; MENTHOL; (HARD PACK)	13	0.9	11
SALEM LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	11
SALEM LIGHTS 100	100MM; FILTER; MENTHOL	9	0.7	11
SATIN 100	100MM; FILTER	10	0.9	11
VANTAGE 100	100MM; FILTER	9	0.7	11
VANTAGE 100	100MM; FILTER; MENTHOL	9	0.7	11
VICEROY RICH LIGHTS 100	100MM; FILTER	11	0.8	11
DORADO	KING SIZE; FILTER	13	0.9	12
KOOL MILDS 100	100MM; FILTER; MENTHOL	11	0.8	12
LARK LIGHTS	KING SIZE; FILTER	13	0.9	12
MERIT 100	100MM; FILTER	10	0.7	12
PHILIP MORRIS	REG SIZE; NON-FILTER	21	1.2	12
PICAYUNE	REG SIZE; NON-FILTER	16	1.0	12
PLAYERS 100	100MM; FILTER; (HARD PACK)	13	0.9	12
VANTAGE	KING SIZE; FILTER	10	0.7	12
VANTAGE	KING SIZE; FILTER; MENTHOL	9	0.7	12

- 1 "Tar" - milligrams total particulate matter (tars) nicotine and water per cigarette.
 2 Nicotine total alkaloids reported in milligrams per cigarette.
 3 Carbon Monoxide reported in milligrams per cigarette.
 * Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.
 ** See statement in text concerning dual filter brands.

PAGE

4

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
VIRGINIA SLIMS 100	100MM; FILTER	14	0.9	12
CAMEL	REG SIZE; NON-FILTER	21	1.4	13
CHESTERFIELD	KING SIZE; NON-FILTER	22	1.5	13
GALAXY	KING SIZE; FILTER	14	0.9	13
L & M	KING SIZE; FILTER; (HARD PACK)	13	0.9	13
L & M	KING SIZE; FILTER	13	0.9	13
L & M 100	100MM; FILTER	14	1.0	13
LARK	KING SIZE; FILTER	14	0.9	13
LARK LIGHTS 100	100MM; FILTER	13	1.0	13
NEWPORT RED	KING SIZE; FILTER; (HARD PACK)	12	0.9	13
RICHLAND	KING SIZE; FILTER	16	1.1	13
RICHLAND	KING SIZE; FILTER; MENTHOL	15	1.0	13
SARATOGA 120	120MM; FILTER; (HARD PACK)	14	0.9	13
SARATOGA 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	0.9	13
ST. MORITZ 100	100MM; FILTER	14	1.1	13
ST. MORITZ 100	100MM; FILTER; MENTHOL	14	1.1	13
VIRGINIA SLIMS 100	100MM; FILTER; MENTHOL	14	0.9	13
WINSTON LIGHTS 100	100MM; FILTER	11	0.8	13
ALPINE	KING SIZE; FILTER; MENTHOL	16	0.9	14
CAMEL	KING SIZE; FILTER	16	1.1	14
CAMEL LIGHTS 100	100MM; FILTER	11	0.8	14
ENGLISH OVALS	KING SIZE; NON-FILTER; (HARD PACK)	28	2.1	14
KENT 100	100MM; FILTER; MENTHOL	15	1.2	14
KOOL	REG SIZE; NON-FILTER; MENTHOL	20	1.2	14
KOOL	KING SIZE; FILTER; MENTHOL	16	1.0	14
MARLBORO	KING SIZE; FILTER (HARD PACK)	16	1.0	14
MARLBORO	KING SIZE; FILTER; MENTHOL	16	1.0	14
MARLBORO 100	100MM; FILTER; (HARD PACK)	16	1.0	14
PHILIP MORRIS COMMANDER	KING SIZE; NON-FILTER	26	1.6	14
TAREYTON	KING SIZE; FILTER	13	0.9	14
WINSTON	KING SIZE; FILTER; (HARD PACK)	16	1.1	14
WINSTON INTERNATIONAL 100	100MM; FILTER; (HARD PACK)	16	1.1	14
BENSON & HEDGES 100	100MM; FILTER; (HARD PACK)	16	1.0	15
BENSON & HEDGES 100	100MM; FILTER; MENTHOL; (HARD PACK)	16	1.0	15
BENSON & HEDGES 100	100MM; FILTER	16	1.0	15
BENSON & HEDGES 100	100MM; FILTER; MENTHOL	16	1.0	15
CAMEL	KING SIZE; FILTER; (HARD PACK)	16	1.1	15
KOOL	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	15
KOOL SUPER LONGS 100	100MM; FILTER; MENTHOL	14	0.9	15
LARK 100	100MM; FILTER	15	1.0	15
MARLBORO	KING SIZE; FILTER	16	1.0	15
MARLBORO 100	100MM; FILTER	16	1.0	15
MONTCLAIR	KING SIZE; FILTER; MENTHOL	15	1.0	15

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

* Indicates "tar" below 0.3 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

** See statement in text concerning Kent Ultra Lights.

PM3001059561

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR ¹	NICOTINE ²	CARBON MONOXIDE ³
NEWPORT	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	15
NEWPORT RED	KING SIZE; FILTER	14	1.0	15
PALL MALL	KING SIZE; NON-FILTER	23	1.3	15
PALL MALL 100	100MM; FILTER	15	1.1	15
PLAYERS	REG SIZE; NON-FILTER; (HARD PACK)	25	1.5	15
SALEM 100	100MM; FILTER; MENTHOL	16	1.2	15
TAREYTON 100	100MM; FILTER	13	0.9	15
WINSTON	KING SIZE; FILTER	16	1.1	15
CENTURY	KING SIZE; FILTER	14	0.9	16
HERBERT TAREYTON	KING SIZE; NON-FILTER	24	1.5	16
LUCKY STRIKE	REG SIZE; NON-FILTER	23	1.4	16
PALL MALL	KING SIZE; FILTER	17	1.1	16
PHILIP MORRIS INTERNATIONAL	100MM; FILTER (HARD PACK)	17	1.1	16
PHILIP MORRIS INTERNATIONAL	100MM; FILTER; MENTHOL; (HARD PACK)	17	1.1	16
RALEIGH	KING SIZE; NON-FILTER	25	1.4	16
RALEIGH	KING SIZE; FILTER	15	0.9	16
SPRING 100	100MM; FILTER; MENTHOL	19	1.1	16
VICEROY	KING SIZE; FILTER	16	0.9	16
VICEROY SUPER LONG 100	100MM; FILTER	14	0.9	16
WINSTON 100	100MM; FILTER	17	1.2	16
HALF & HALF	KING SIZE; FILTER	18	1.3	17
MAX 120	120MM; FILTER	18	1.4	17
MAX 120	120MM; FILTER; MENTHOL	19	1.4	17
NEWPORT	KING SIZE; FILTER; MENTHOL	17	1.2	17
OLD GOLD STRAIGHT	KING SIZE; NON-FILTER	26	1.6	17
RALEIGH 100	100MM; FILTER	16	1.0	17
TALL 120	120MM; FILTER; MENTHOL	17	1.3	17
OLD GOLD FILTER	KING SIZE; FILTER	17	1.3	18
SALEM	KING SIZE; FILTER; MENTHOL	16	1.1	18
MORE 120	120MM; FILTER; MENTHOL	16	1.2	19
TALL 120	120MM; FILTER	20	1.5	19
MORE 120	120MM; FILTER	17	1.2	20
NEWPORT 100	100MM; FILTER; MENTHOL	19	1.5	20
OLD GOLD FILTER 100	100MM; FILTER	20	1.5	20
BULL DURHAM	KING SIZE; FILTER	28	1.8	23

¹ "tar" - milligrams total particulate matter less nicotine and water per cigarette.

² Nicotine total alkaloids reported in milligrams per cigarette.

³ Carbon Monoxide reported in milligrams per cigarette.

* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

** See statement in text concerning Bull Durham brand.